WHAT IS CLAIMED IS:

1. A method of manufacturing a composite product, comprising:

(i) providing a substrate layer;

(ii) providing a slurry formulation including an hydraulic binder and dewatering agent;

(iii) applying said slurry to said substrate layer to form a functional layer; and

(iv) dewatering the functional layer, wherein the quantity of dewatering agent is sufficient to maintain porosity and thereby permit de-watering of the functional layer through the substrate layer.

2. A method according to claim 1, comprising repeating steps (ii) through (iv), wherein the quantity of dewatering agent is sufficient to maintain porosity and thereby permit de-watering of each functional layer through the substrate layer and any additional functional layer.

3. A method according to claim 1, wherein the functional layer includes one or more functional additives to provide desired properties to that layer.

4. A method according to claim 1, wherein the substrate layer is a fibre reinforced base material.

5. A method according to claim 1, wherein the substrate layer is a reinforced cementitious product.

6. A method according to claim 1, wherein functional layers are added to both sides of the substrate layer.

7. A method according to claim 1, wherein functional layers are added to one side of the substrate layer.

8. A method according to claim 1, wherein the functional layer is covered by a reinforcing layer.

9. A method according to claim 1, wherein the reinforcing layer comprises fibre mesh or netting.

10. A method according to claim 1, wherein the reinforcing layer is a fibre reinforced cementitious layer.

11. A method according to claim 1, wherein the composite product comprises outer layers provided by fibre reinforced cementitious layers with one or more functional layers positioned therebetween.

12. A method according to claim 11, wherein the functional layers have a low fibre content relative to the fibre reinforced cementitious layers.

13. A method according to claim 1, wherein additives and/or fillers are incorporated in the functional layer to provide desired acoustic properties, thermal or fire performance, density modification, cost or production efficiency, compressive or tensile strength, water permeability, density or aesthetic properties to the composite product.

14. A method according to claim 2, wherein the dewatering agent is provided in a sufficient quantity to maintain porosity in the functional layers and the substrate layer during dewatering.

15. A method according to claim 1, wherein the dewatering agent is a particulate material.

16. A method according to claim 1, wherein the dewatering agent is selected from the group consisting of fly ash, alumina trihydrate, silica flour, cenospheres and mixtures thereof.

17. A method according to claim 1, wherein the product is cured by air curing, steam curing or hydrothermally cured in an autoclave.

18. A method according to claim 1, wherein the product is a cementitious building board or product or gypsum building board.

19. A method according to claim 1, wherein the thickness of the functional layer on the product is between about 0.1 and 10 mm.

20. A method according to claim 1, wherein the hydraulic binder used in the slurry formulation is selected from the group consisting of white, grey or pigmented cements, hydraulic limes and mixtures thereof.

21. A method according to claim 1, wherein the binder in the formulation is between about 10 and 50 wt% based on total dry ingredients.

22. A method according to claim 1, wherein fly ash is the dewatering agent.

23. A method according to claim 22, wherein the dewatering agent comprises:

i) about 10 to 60% of the formulation based on total dry ingredients of a first fly ash component having a particle diameter between about 1 and 100 microns; and

ii) about 5 to 30 wt% of the formulation based on total dry ingredients of a second fly ash component having a maximum particle size diameter of around 10 microns.

24. A method according to claim 1, wherein the dewatering agent includes a coarse fraction fly ash having a particle size diameter greater than about 100 microns.

25. A method according to claim 1, wherein the functional layer includes additives to improve the properties of the substrate layer such that upon dewatering of the functional layer, the substrate layer is thus treated with said additive.

26. A method according to claim 1, wherein the slurry formulation is applied to the substrate layer by means of splattering.